

secure interchangeability it seems essential, the third report points out, that this part of the legal document should be adopted without amendment by every institution cooperating in the system. A pamphlet has been prepared setting out the main features of the options available and the precise terms offered by the selected insurance companies; it also embodies the detailed arrangements with the companies, and copies will be furnished on request by the companies concerned.

FROM time to time attention has been directed in these columns to the recent successful endeavours to develop the University of Hong Kong. The prospectus for the session 1913-14, and a pamphlet providing details concerning the faculty of engineering, have reached us, and an examination of the arrangements made shows that there is likely to be much useful work done in the next few years in the spread of higher scientific education in China. A resolution adopted by the Court of the University says: "It is resolved that the objects of the University are (*inter alia*) to afford a higher education, more especially in subjects of practical utility, such as applied science, medicine, &c. Similarly, in a dispatch from the Viceroy of Canton, we read "the teaching of applied science, including civil, mechanical, and electrical engineering and surveying, meets the present and most urgent need of our country." The University possesses spacious laboratories for experimental work and is assured already of excellent equipment. In the first year of the University fifty-three students applied for admission in the faculties of engineering, medicine, and arts, and of that number thirty-eight elected to take instruction in engineering. When the University commenced instruction in engineering science it was stated definitely that no student would receive a degree unless he attained the same standard as that required by the London University. To that policy the faculty of engineering is committed, and the regulations have been framed with that object in view.

THE eighth report has been published (Cd. 6871) of the Rural Education Conference, which was constituted by minutes of the Presidents of the Board of Agriculture and Fisheries and of the Board of Education in 1910. The conference has had under consideration the following reference received from the Board of Agriculture and Fisheries last November:—"To inquire into the methods which local education authorities adopt with the object of promoting efficiency in the performance of manual processes, e.g. ploughing, hedging, ditching, sheep-shearing, milking, and basket-making, and to advise as to any further action that may appear to be desirable for the purpose of developing skill in workmen employed in agriculture." After the examination of eleven expert witnesses representing farmers and educationists, the conference drew up a number of recommendations which may be summarised very briefly. To develop skill in agricultural employees it is recommended that instruction in certain manual processes of agriculture should be provided for the elder boys and girls attending elementary schools in rural districts; local education authorities should regulate the holidays in country schools so as to leave the boys free to work on the land at a time when their work is most useful; classes in manual processes for men employed upon the land should be conducted so as to be more in the nature of assistance to, rather than the formal instruction of, those who attend; instruction in manual processes should be provided more generally throughout the country, present instruction should be made more thorough, and practical instruction be encouraged in every possible way.

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SOCIETIES AND ACADEMIES.

PARIS.

Academy of Sciences, July 7.—**M. F. Guyon** in the chair.—**Paul Appell**: Developments in series proceeding according to the inverse of given polynomials.—**J. Boussinesq**: The equations of dynamic equilibrium of the superficial layer separating a liquid from another fluid.—**A. Lacroix**: The rhyolitic and dacitic rocks of Madagascar, and in particular those of the Sakalave region. Complete analyses of twenty-one rocks are given, and the distribution of the rocks in the area discussed.—**A. Müntz** and **E. Lainé**: Studies on the irrigation of soils. The minimum irrigation gives the best cultural results; it depends on the slope of the land, the nature of the vegetation, and the dimensions of the distributing channels.—**G. Charpy** was elected a correspondant for the section of chemistry in the place of the late Louis Henry.—**Ch. Platrier**: Meromorph solutions of certain linear integral equations of the third species.—**M. Barré**: Helicoids of the second species.—**Th. Got**: The symmetries of the reproductive groups of indefinite ternary quadratic forms.—**A. Romieux**: Contribution to the study of the terrestrial deformation.—**C. G. Bedreag**: Electrification by the X-rays. The charge depends on the pressure, the nature of the metal of the electrode, difference of contact potential between the electrode and the surrounding walls, and ionisation of the gas. In the present communication a special study is made of the function of the metal.—**André Chéron**: A new arrangement for the examination of stereoscopic photographs.—**Henri Labrousse**: The visibility of traces of foreign substances deposited on a surface of pure water. The method described permits of the thin layers being detected by optical means without the use of any special apparatus.—**Mlle. Cécile Spielrein**: The equilibrium of lithium sulphate with the alkaline sulphates in presence of their mixed solution at 100° C.—**Ruby Wallach**: The thermal analysis of clays. The double galvanometer of Le Chatelier-Saladin with a thermocouple was applied to the examination of various kaolins and clays, the heat absorption due to the volatilisation of water being shown by well-marked depressions on the curve. A slight heat evolution between 900° C. and 1000° C. was also observed in some cases, an effect probably due to a transformation of alumina.—**André Job** and **Paul Goissedet**: The cerium acetylacetonates. Ceric acetylacetonate has been prepared and analysed.—**M. Dumesnil**: Diketones obtained by the action of the xylene dibromides on the sodium derivative of *iso*-propylphenylketone and their decomposition by means of sodium amide.—**Roger Douris**: The addition of hydrogen to some secondary α -ethylenic alcohols in presence of nickel.—**Marcel Baudouin** and **Louis Reutter**: The analysis of the contents of some Gallo-Roman vases and of a flask of perfume, found in a vault at la Vendée. These vases date probably from the third century. Styrax, turpentine, resin, asphalt, or Judean bitumen, and incense were found. These prove indirectly the existence of commercial relations between France and Asia Minor, Somaliland and Judea.—**J. Durand**: A layer of aragonite crystals in the marls attributed to the Upper Trias in eastern Corbières.—**C. Gaudefroy**: The dehydration figures of different types obtained in the same crystals.—**A. Guilliermond**: The rôle of the chondriome in the elaboration of the reserve products in fungi.—**A. Marie** and **Léon MacAuliffe**: The anthropometric study of 200 Madagascans.—**E. Gley** and **Alf. Quinquaud**: The influence of the suprarenal secretion on the vasomotive actions dependent on the splanchnic nerve.—**A. Barbieri**: The difference in chemical composition between the great sympathetic system and the axial

nervous tissue of the cranial and spinal nerves.—E. Bourquelot and M. Bridel: The synthesis of β -geranylglucoside with the aid of emulsin; its presence in plants. The glucoside can be synthesised from geraniol saturated with water and glucose in presence of emulsin; a larger yield is obtained in aqueous acetone solution. The presence of this glucoside was proved in *Pelargonium odoratissimum*.—P. Noël Bernard and J. Bauche: The influence of the mode of penetration (cutaneous or buccal) of *Stephanurus dentatus* on the localisations of this Nematod in the organism of the pig and on its evolution.—E. Pinoy: The necessity of a bacterial association for the development of a Myxobacterium, *Chondromyces crocatus*.—F. Picard and G. R. Blanc: Coccobacillary infections in insects.—F. Kerforne: The Devonian iron minerals of Brittany.—Antonin Lanquine: The presence of layers containing *Witchellia*, of the lower Bajocian, at some new points of the Var.—Alfred Angot: A new barometric formula. The barometric formula communicated to the last meeting is equivalent to Babinet's formula. The latter in its original form is more easy to memorise.—Ladislas Gorczynski: The reduction in the solar radiation for 1912 from pyrheliometric measurements made in Poland.

BOOKS RECEIVED.

Some Secrets of Nature. With an Introduction by W. J. P. Burton. Pp. xiv+144+plates. (London: Methuen and Co., Ltd.)

The Romance of Nature. A Nature Reader for Senior Scholars. With a Preface by Rev. A. Thornley. Pp. xix+164+x plates. (London: Methuen and Co., Ltd.) 2s.

Démonstration du Théorème de Fermat. By Prof. E. Fabry. Pp. 22. (Paris: Hermann et Fils.) 1.50 francs.

Grundriss der Fermentmethoden. By Prof. J. Wohlgemuth. Pp. ix+355. (Berlin: J. Springer.) 10 marks.

Petrographische Untersuchungen an Gesteinen des Polzengebietes in Nord-Böhmen. Des xxxii. Bandes. Der Abhandlungen der Mathematisch-Physischen Klasse. No. VII. By K. H. Scheumann. Pp. vi+607-776. (Leipzig: B. G. Teubner.) 8 marks.

Memoirs of the Geological Survey of India. Vol. xl. Part 1. The Oil-Fields of Burma. By E. H. Pascoe. Pp. x+269+xxxix+54 plates. (Calcutta: Geological Survey of India; London: Kegan Paul and Co., Ltd.) 5 rupees, or 6s. 8d.

Les Idées Modernes sur la Constitution de la Matière. Conférences Faites en 1912. By E. Bauer, A. Blanc, E. Bloch, Mme. P. Curie, A. Debiérne, and others. Pp. 370. (Paris: Gauthier-Villars.) 12 francs.

Les Moteurs Thermiques dans leurs rapports avec la Thermodynamique. Moteurs à explosion et à Combustion. Machines alternatives à Vapeur. By F. Moritz. Pp. vi+297. (Paris: Gauthier-Villars.) 13 francs.

Proceedings of the Third Meeting of the General Malaria Committee held at Madras, November 18, 19, and 20, 1912. Pp. iv+289. (Simla: Government Central Branch Press.)

The Tarn and the Lake: Thoughts on Life in the Italian Renaissance. By C. J. Holmes. Pp. x+48. (London: P. Lee Warner.) 2s. 6d. net.

The British Parasitic Copepoda. By T. Scott and A. Scott. Vol. i. Text. Pp. ix+252+2 plates. Vol. ii. Plates. Pp. xii+1xxii plates. (London: The Ray Society; Dulau and Co., Ltd.) 15s. net.

Das Tierreich. Edited by F. E. Schulze. Lief. 34 to 38. (Berlin: R. Friedländer und Sohn.) 18 marks;

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38 marks; 13 marks; 3.50 marks; 5.20 marks respectively.

Animal Husbandry for Schools. By Prof. M. W. Harper. Pp. xxii+409. (London: Macmillan and Co., Ltd.) 6s. net.

The Development of the Human Body. By Prof. J. P. McMurrich. Fourth edition. Pp. x+495. (London: H. Kimpton.) 12s. 6d. net.

Die Europäische Schlangen. By Dr. F. Steinhil. Zweites Heft. Plates 6-10. (Jena: G. Fischer.) 3 marks.

Sitzungsberichte der Physikalisch-medizinischen Societät in Erlangen. 44 Band. 1912. Pp. xxvii+256. (Erlangen: M. Mencke.)

Irritability: a Physiological Analysis of the General Effect of Stimuli in Living Substance. By Prof. Max Verworn. Pp. xii+264. (New Haven, Conn.: Yale University Press; London: Oxford University Press.) 15s. net.

Travers' Golf Book. By J. D. Travers. Pp. 232. (London: Macmillan and Co., Ltd.) 8s. 6d. net.

Paläontologische Zeitschrift. Edited by Prof. O. Jaekel. Band I. Heft 1. Pp. 160+3 plates. (Berlin: Gebrüder Borntraeger.) 25 marks.

The Eugenics Education Society. Fifth Annual Report, 1912-13. Pp. 76. (London: Kingsway House, Kingsway.)

A History of the First Half-Century of the National Academy of Sciences, 1863-1913. Pp. ix+399+plates. (Washington: The National Academy of Sciences.)

Department of Commerce and Labor. The Foreign Commerce and Navigation of the United States for the Year ending June 30, 1912. Pp. 1342. (Washington: Government Printing Office.)

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